

Notice of Allowability

Application No.

10/057,531

Applicant(s)

LYON ET AL.

Examiner

Padmavathi v Baskar

Art Unit

1645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/4/04.
2. ☒ The allowed claim(s) is/are 3, 6 - 14 and 48, and have been renumbered as 1-11 respectively.
3. ☒ The drawings filed on 11/15/02 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 8/19/04.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Amendment

1. Applicant's after final amendment filed on 8/04/04 is acknowledged.

Status of Claims

2. Claims 3 and 5 have been amended.

Claim 4 has been cancelled.

Claims 3, 5-14 and 48 are under examination as an elected invention in the application.

Claims 1-2, 15-47 and 49 -52 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected group.

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ann S. Hobbs 8/19/04, the application has been amended as follows:

Claims 1-2, 5, 15-47 and 49 -52 are cancelled.

Claim 3, line 3, after 1₄₂) inserted - - - SEQ.ID.NO: 2 - - -

Claim 9, line 3, after vector, inserted - - - of claim 3 - - -

Claim 6, line 1, after claim, deleted "5" and inserted therefore - - 3 - -

Specification Informalities withdrawn

4. In view of submission of Statement regarding ATCC depository information for plasmid pETATpfMSP-1₄₂ (3D7), the Specification Informalities are withdrawn.

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Claim Rejections - 35 USC 112, first paragraph withdrawn

5. In view of one of the inventor, E. Angov submission of Statement (see letter 8/4/04) regarding ATCC depository information on plasmid pETATpfMSP-1₄₂ (3D7) and attorney of record, Mrs. Ann Hobb's signed statement on page 9, 2nd paragraph of the amendment under Remarks section, filed on 8/4/04 confirming that upon the granting of a patent, the deposit will be freely available to the public without restrictions and that the deposit will be maintained for the required period of not less than 30 years or 5 years beyond the date of the last request for a sample was made, the rejection of claims 3, 6 -14 and 48 under 35 U.S.C. 112, first paragraph is withdrawn.

Claim Rejections - 35 USC § 102 withdrawn

6. In view of amendment to the claim 3, the rejection of claim 3 under 35 U.S.C. 102(b) as being anticipated by Chang et al or Kumar et al 1995, Molecular Medicine 1, 325-332 is withdrawn. This rejection is withdrawn because neither Kumar not Chang disclose a recombinant vector comprising a DNA sequence ^{encoding seq. I.D. No. 2} from *Plasmodium falciparum* 3D7 encoding C-terminal 42kD fragment of merozoite surface protein, MSP-1₄₂. The prior art discloses recombinant vector comprising a DNA sequence from *Plasmodium falciparum* FVO strain.

Claim Rejections - 35 USC § 103 withdrawn

7. In view of amendment to the claim 9, the rejection of claims 9-14 and 48 under 35 U.S.C. 103(a) as being unpatentable over Kumar et al 1995, Molecular Medicine 1, 325-332 in view of Short Protocols in Molecular Biology Ed: Ausubel is withdrawn. This rejection is withdrawn because Kumar et al do not disclose a recombinant vector comprising a DNA sequence from *Plasmodium falciparum* 3D7 encoding C-terminal 42kD fragment of merozoite surface protein, MSP-1₄₂, SEQ.ID.NO: 2.

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8. The claims are drawn to a recombinant vector comprising a DNA sequence from *Plasmodium falciparum* 3D7 strain encoding C-terminal 42kD fragment of merozoite surface protein, MSP-1₄₂, SEQ.ID.NO: 2. This recombinant vector encoding strain differs from *P.falciparum* FVO strain in invading erythrocytes that are devoid of sialic acid on its surface whereas FVO strain is dependent on sialic acids for erythrocyte invasion. Further, *Plasmodium falciparum* 3D7 DNA sequence encoding C-terminal 42kD fragment of merozoite surface protein, MSP-1₄₂ is different from that of FVO strain. Thus the claims define over prior art of record.

Remarks

9. Claims 3, 6- 14 and 48 are allowed and have been renumbered as 1-11 respectively.

Conclusion

10. Papers related to this application may be submitted to Group 1600, AU 1645 by facsimile transmission. Papers should be transmitted via the PTO Fax Center, which receives transmissions 24 hours a day and 7 days a week. The transmission of such papers by facsimile must conform to the notice published in the Official Gazette, 1096 OG 30, November 15, 1989. The RightFax number for submission of before-final amendments is (703) 872-9306. The RightFax number for submission of after-final amendments is (703) 872-9307.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Padma Baskar Ph.D., whose telephone number is ((571) 272-0853. A message may be left on the Examiner's voice mail system. The Examiner can normally be reached on Monday to Friday from 6.30 a.m. to 4.00 p.m. except First Friday of each bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on (571) 272-0864. Any inquiry of a general nature

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or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Padma Baskar Ph.D.

8/19/04


LYNETTE R. F. SMITH
SUPERVISORY PATENT EXAMINER
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